

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in Aloe vera

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	ACEMANNAN	Leaf	--	--		
14	ACEMANNAN	Juice	--	--		Lee, S. Y., Ryu, I. W., Shim, C. S. 1997. Purification and Characterization of Bioactivity Compound Acemannan from Aloe vera. Korean J. Pharmacog., 28(2): 65-71.
3	ALANINE	Leaf	15769	15769	0.737970393738035	
5	ALOCUTIN-A	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
24	ALOE-EMODIN	Leaf	--	45.4		
24	ALOE-EMODIN	Juice	--	--		
24	ALOE-EMODIN	Plant	--	--		
2	ALOESIN	Juice	--	--		Rauwald, H. W., Maucher, R., Niyonizima, D. D. 1997. Three 8-C-glucosyl-5-methyl-chromones from Aloe barbadensis (Ph. Eur. 1997). Pharmazie, 52(12): 962-964.
2	ALOESIN	Plant	--	--		
2	ALOESIN	Leaf	--	--		
12	ALOIN	Leaf	--	--		
5	ALUMINUM	Leaf	22	22	-0.756963512814621	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	AMYLASE	Leaf	--	20		Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	ANTHRAQUINONES	Plant	--	300000		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
12	ARACHIDONIC-ACID	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
12	ARACHIDONIC-ACID	Shoot	--	--		Afzal, M., Ali, M., Hassan, R. A. H., Sweedan, N., Dhami, M. S. I. 1991. Identification of Some Prostanoids in Aloe vera Extracts. Plant Medica, 57(1): 38-40.
12	ARACHIDONIC-ACID	Juice	--	--		Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.
14	ARGININE	Leaf	78216	78216	4.040361114705058	
112	ASCORBIC-ACID	Leaf	6260	6260	0.13692813428133838	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
2	ASPARAGINE	Leaf	--	--		Waller, G. R., Mangiafico, S., Ritchey, C. R. 1978. A Chemical Investigation of Aloe barbadensis. Proc. Okla. Acad. Sci. 58: 69-.
3	ASPARTIC-ACID	Plant	31545	--		Pakistan Encyclopedia Planta Medica. 1986.
3	ASPARTIC-ACID	Leaf	--	--		Waller, G. R., Mangiafico, S., Ritchey, C. R. 1978. A Chemical Investigation of Aloe barbadensis. Proc. Okla. Acad. Sci. 58: 69-.
6	BARBALOIN	Leaf	--	42400		
6	BARBALOIN	Juice	--	--		
6	BARBALOIN	Plant	--	--		Suga, T., Hirata, T. 1983. The Efficacy of the Aloe Plants Chemical Constituents and Biological Activities. Cosmet. Toiletries 98(6): 105-108.
1	BENZYL-ACETONE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
53	BETA-CAROTENE	Stem Essent. Oil	107.2	7.2		Rowe, T. D., Parks, L. M. 1941. A Phytochemical Study of Aloe vera Leaf. <i>J. Amer. Pharm. Ass. Sci. Ed.</i> , 30: 262-266.
53	BETA-CAROTENE	Leaf	3	3	-1.1248743086080972	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
47	BETA-SITOSTEROL	Leaf	--	--		
47	BETA-SITOSTEROL	Plant	--	--		
4	BRADYKININASE	Plant	--	--		
28	CALCIUM	Leaf	190	4600	-0.9454619722825477	
4	CALCIUM-OXALATE	Leaf	--	--		Rowe, T. D., Parks, L. M. 1941. A Phytochemical Study of Aloe vera Leaf. <i>J. Amer. Pharm. Ass. Sci. Ed.</i> , 30: 262-266.
4	CALCIUM-OXALATE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
2	CAMPESTEROL	Leaf	--	--		
2	CAMPESTEROL	Plant	--	--		
1	CATALASE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
1	CHOLESTEROL	Leaf	40	120		
1	CHOLESTEROL	Plant	--	--		Suga, T., Hirata, T. 1983. The Efficacy of the Aloe Plants Chemical Constituents and Biological Activities. <i>Cosmet. Toiletries</i> 98(6): 105-108.
1	CHOLESTEROL	Shoot	--	--		Afzal, M., Ali, M., Hassan, R. A. H., Sweedan, N., Dhami, M. S. I. 1991. Identification of Some Prostanoids in Aloe vera Extracts. <i>Plant Medica</i> , 57(1): 38-40.
20	CHOLINE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	CHOLINE-SALICYLATE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
24	CHROMIUM	Leaf	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
5	CHRYSAZIN	Leaf	--	--		Zwaving, J. H., Elema, E. T. 1976. A Comparative Investigation of Two Methods for the Determination of 1,8-dihydroxyanthracene Derivatives in Vegetable Drugs. Pharm. Weekbl. 111: 1315-.
6	CHRYSOPHANIC-ACID	Juice	--	--		Waller, G. R., Mangiafico, S., Ritchey, C. R. 1978. A Chemical Investigation of Aloe barbadensis. Proc. Okla. Acad. Sci. 58: 69-.
6	CHRYSOPHANIC-ACID	Plant	--	--		
6	CHRYSOPHANIC-ACID	Leaf	--	--		Mary, N. Y., Christensen, B. V., Beal, J. L. 1956. A Paper Chromatographic Study of Aloe, Aloin and Cascara sagrada. J. Amer. Pharm. Ass. Sci. Ed., 45: 229-232.
10	CHRYSOPHANOL	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
18	CINNAMIC-ACID	Plant	--	--		
2	COBALT	Leaf	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
6	CONIFERYL-ALCOHOL	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
57	COUMARIN	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
13	CYSTEINE	Leaf	--	--		Yagi, A., Shida, T., Nishimura, H. 1987. Effect of Amino Acids in Aloe Extract on Phagocytosis by Peripheral Neutrophil in Adult Bronchial Asthma. Jap. J. Allergol. 36(12): 1094-1101.
2	CYSTINE	Juice	--	--		Waller, G. R., Mangiafico, S., Ritchey, C. R. 1978. A Chemical Investigation of Aloe barbadensis. Proc. Okla. Acad. Sci. 58: 69-.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	D-GLUCOSE	Leaf	--	--		Haq, Q. N., Hannan, A. 1981. Studies on Glucogalactomannan from the Leaves of Aloe vera Tourn. (Ex. Linn). Bangladesh J. Sci. Ind. Res. 16 1/4: 68-72.
58	EMODIN	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
58	EMODIN	Leaf	--	--		Saleem, R., Faizi, S., Deeba, F., Siddiqui, B. S., Qazi, M. H. 1997. Anthrones from Aloe barbadensis. Phytochemistry, 45(6): 1279-1282.
15	FIBER	Leaf	177000	177000	0.1912434448814181	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
15	FOLACIN	Leaf	0.027	0.2	-1.0215226996703113	
23	FOLIC-ACID	Leaf	27	200	0.9999999999999997	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
13	FORMIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
8	FRUCTOSE	Stem Essent. Oil	--	--		Rowe, T. D., Parks, L. M. 1941. A Phytochemical Study of Aloe vera Leaf. J. Amer. Pharm. Ass. Sci. Ed., 30: 262-266.
8	FRUCTOSE	Leaf	--	--		Rowe, T. D., Parks, L. M. 1941. A Phytochemical Study of Aloe vera Leaf. J. Amer. Pharm. Ass. Sci. Ed., 30: 262-266.
8	FRUCTOSE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
1	GALACTOSE	Plant	--	--		
1	GALACTOSE	Leaf	--	--		
3	GLUCOMANNAN	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	GLUCOMANNAN	Leaf	--	--		Mandal, G., Das, A. 1980. Characterization of the Polysaccharides of Aloe barbadensis Miller, Part II. Structure of the Glucomannan Isolated from the Leaves of Aloe barbadensis Miller. Carbohydr. Res. 87: 249-256.
1	GLUCOSAMINE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
7	GLUCOSE	Leaf	280	1030	-0.6406770531666487	
8	GLUTAMIC-ACID	Leaf	43256	43256	0.28830994883469857	
5	GLUTAMINE	Leaf	20607	20607		
8	GLYCEROL	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
12	GLYCINE	Leaf	5030	5030	-1.4304208502349065	
7	HISTIDINE	Leaf	2327	2327	-1.5303131560149847	
1	HYDROXYPROLINE	Juice	--	--		Waller, G. R., Mangiafico, S., Ritchey, C. R. 1978. A Chemical Investigation of Aloe barbadensis. Proc. Okla. Acad. Sci. 58: 69-.
6	IRON	Leaf	30	300	-0.1601568835092345	Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry
3	ISOLEUCINE	Leaf	8526	8526	-0.9114311540762737	
7	LAURIC-ACID	Juice	--	--		Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.
2	LEUCINE	Leaf	6952	6952	-1.4724738413689846	
13	LIGNIN	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
27	LINOLEIC-ACID	Juice	--	--		Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
21	LUPEOL	Plant	--	--		
21	LUPEOL	Leaf	--	--		
4	LYSINE	Leaf	7748	7748	-1.1656410239523205	
65	MAGNESIUM	Leaf	930	930	-1.233985540583036	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
14	MANGANESE	Leaf	6	0.6	-0.45888840936498615	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
3	MANNOSE	Leaf	--	--		
3	MANNOSE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
3	MUCILAGE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
3	MUCILAGE	Leaf	--	--		Segal, A., Taylor, J. A., Eoff III, J. C. 1968. A Re-Investigation of the Polysaccharide Material from Aloe vera mucilage. <i>Lloydia</i> 31(4): 423E.
1	MUCOPOLYSACCHARIDES	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
6	MYRISTIC-ACID	Juice	--	--		Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. <i>Biosci Biotech Biochem</i> 57(8): 1350-1352.
39	NIACIN	Leaf	--	64	-0.4074895973394803	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	NIACINAMIDE	Plant	--	--		
1	OCTADEC-1-ENE	Juice	--	--		Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. <i>Biosci Biotech Biochem</i> 57(8): 1350-1352.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
18	OLEIC-ACID	Shoot	--	--		Afzal, M., Ali, M., Hassan, R. A. H., Sweedan, N., Dhami, M. S. I. 1991. Identification of Some Prostanoids in Aloe vera Extracts. <i>Plant Medica</i> , 57(1): 38-40.
1	OLEIC-ACID-ETHYL-ESTER	Juice	--	--		Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. <i>Biosci Biotech Biochem</i> 57(8): 1350-1352.
25	P-COUMARIC-ACID	Juice	--	--		Waller, G. R., Mangiafico, S., Ritchey, C. R. 1978. A Chemical Investigation of Aloe barbadensis. <i>Proc. Okla. Acad. Sci.</i> 58: 69-.
25	P-COUMARIC-ACID	Plant	--	--		Pakistan Encyclopedia <i>Planta Medica</i> . 1986.
25	P-COUMARIC-ACID	Leaf	--	--		Doff, W. 1953. In Vitro Tuberculostatic Action of Aloe and its Most Important Components. <i>Arzneim-Forsch</i> 3: 627-630.
13	PALMITIC-ACID	Juice	--	--		Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. <i>Biosci Biotech Biochem</i> 57(8): 1350-1352.
1	PALMITIC-ACID-ETHYL-ESTER	Juice	--	--		Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. <i>Biosci Biotech Biochem</i> 57(8): 1350-1352.
2	PALMITOLEIC-ACID	Juice	--	--		Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. <i>Biosci Biotech Biochem</i> 57(8): 1350-1352.
1	PENTADECANOIC-ACID	Juice	--	--		Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. <i>Biosci Biotech Biochem</i> 57(8): 1350-1352.
7	PHENYLALANINE	Leaf	7103	7103	-0.8189293423736816	
2	PHOSPHATIDYL-CHOLINE	Shoot	--	--		Afzal, M., Ali, M., Hassan, R. A. H., Sweedan, N., Dhami, M. S. I. 1991. Identification of Some Prostanoids in Aloe vera Extracts. <i>Plant Medica</i> , 57(1): 38-40.
4	PHOSPHORUS	Leaf	6	940	-0.7417351347095709	
2	PHYTOSTEROLS	Plant	--	--		Pakistan Encyclopedia <i>Planta Medica</i> . 1986.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
30	POLYPHENOLS	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
14	POTASSIUM	Leaf	100	850	-1.3023924982974464	
18	RHEIN	Juice	--	--		Vittori, N., Collins, M. 1996. Production of Rhein and Rhein Derivatives for Treatment of Mycobacterial Infections.
18	RHEIN	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
15	RIBOFLAVIN	Leaf	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
5	SAPONINS	Plant	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
60	SELENIUM	Leaf	--	2.3	-0.20582736095134732	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	SERINE	Leaf	23540	23540	2.8994578607835177	
4	SILICON	Leaf	22	2.2	-0.40664836341939714	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	SODIUM	Leaf	40	510	-0.5567053929446788	
8	STEARIC-ACID	Juice	--	--		Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.
12	STIGMASTEROL	Shoot	--	--		Afzal, M., Ali, M., Hassan, R. A. H., Sweedan, N., Dhami, M. S. I. 1991. Identification of Some Prostanoids in Aloe vera Extracts. Plant Medica, 57(1): 38-40.
31	THIAMIN	Leaf	0.8	0.8	-1.5639990589196717	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	THREONINE	Leaf	14652	14652	1.6302832433742858	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	TIN	Leaf	11	11	-0.5530067419183887	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	TRIOLEIN	Shoot	--	--		Afzal, M., Ali, M., Hassan, R. A. H., Sweedan, N., Dhami, M. S. I. 1991. Identification of Some Prostanoids in Aloe vera Extracts. Plant Medica, 57(1): 38-40.
8	TYROSINE	Leaf	5073	5073	-0.8148273240686774	
3	VALINE	Leaf	12769	12769	0.02133791872334207	
3	XYLOSE	Leaf	--	--		
3	XYLOSE	Plant	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
77	ZINC	Leaf	11	770	4.198735238139277	